BLM RENEWABLE ENERGY SUMMIT

Transmission Panel

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Birth of a Transmission Project - when is it real?

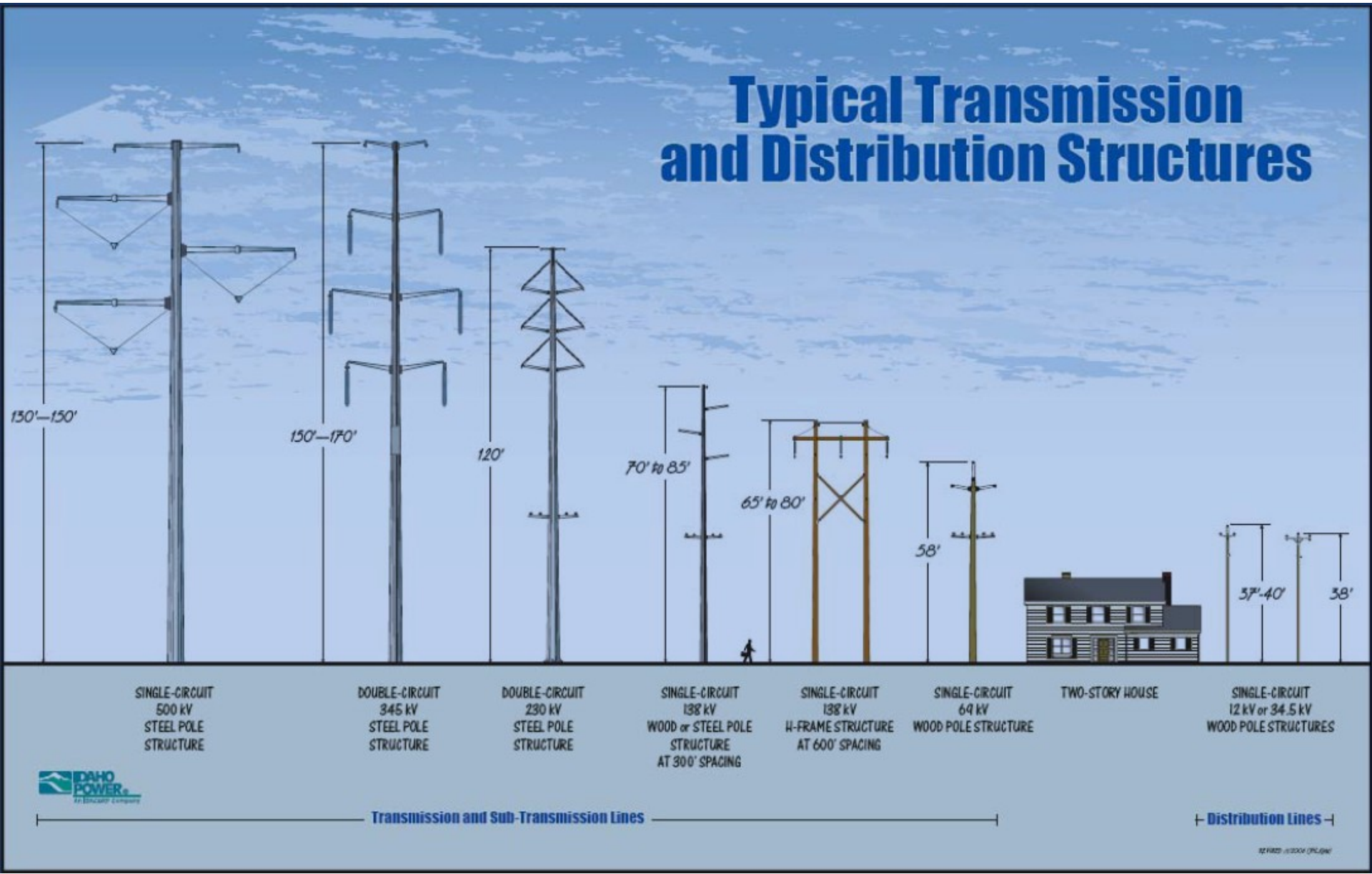
- Under the Federal Regulatory Energy Commission jurisdictional Open Access Transmission Tariff (OATT), Transmission Providers must plan for expansion of the transmission grid for both local and wholesale/interstate needs.
- When a customer makes a request for service – generator or load, we are required to construct and build the transmission to deliver.
- Part of the decision process is when can it be in service, how much capacity, and what will it cost?
- Specific timelines for study processes per the OATT
- Denial of service results in no commercial access, requires other options

When are Customers Real?

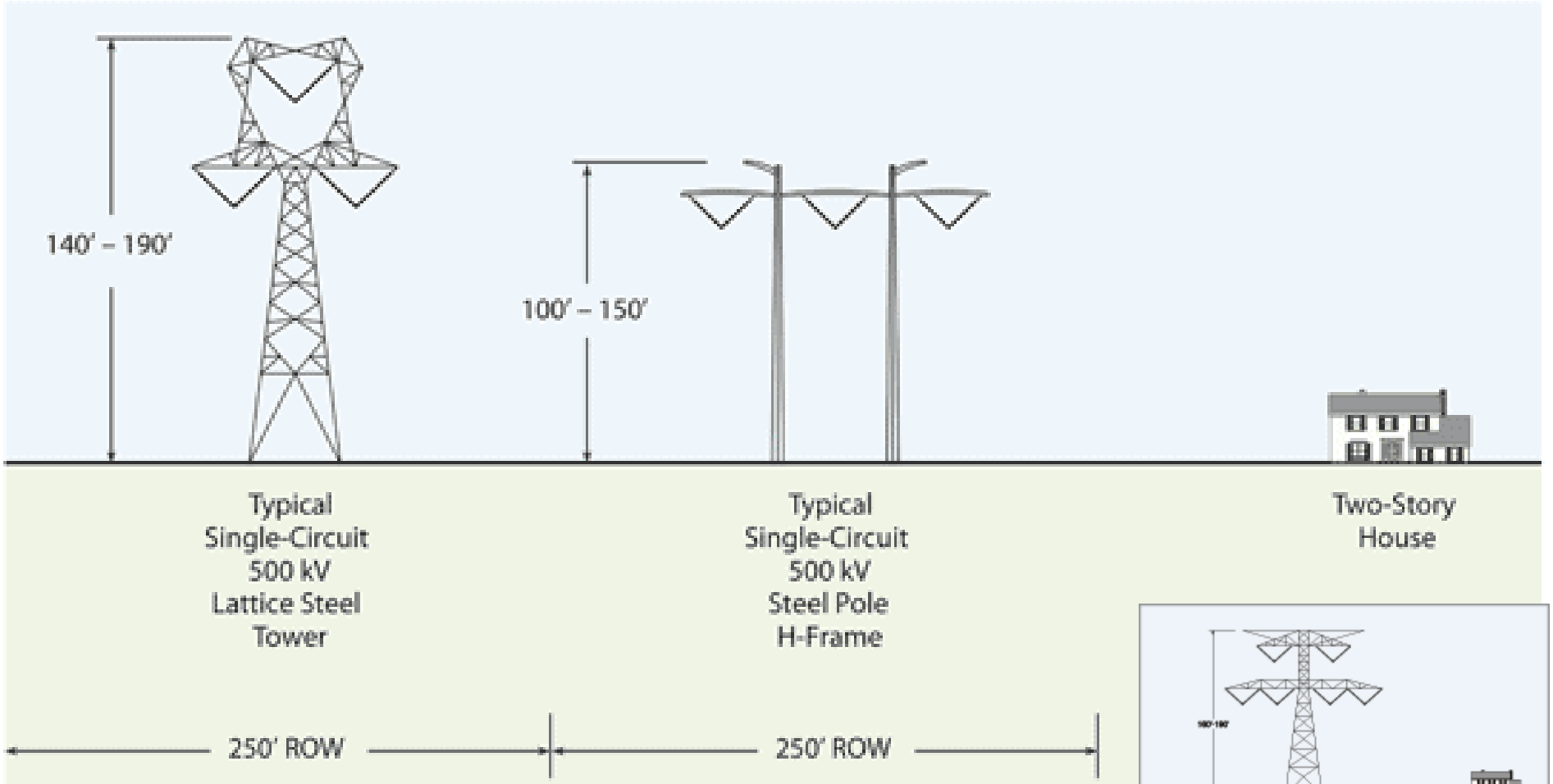
Total Idaho Power Generation Interconnection Queue Applications

Sum of Max	Fuel Type																
County		Biogas	Biomass	CCCT	Coal	Cogen	CT	Diesel	Gas	Geothermal	Hydro	Landfill	Solar	Steam	Wind	Wood	Grand Total
															100		100
Ada		1				13	200	105	1,260		124	3					1,706
Baker											3				743		746
Bannock									0								0
Bingham															108		108
Blaine										50							50
Boise			13														13
Canyon	280		3			20			2,244		3						2,550
Canyon			5														5
Cassia								118							283		401
Elko										95							95
Elmore	206			1,312	1,500		340		6,702		15		10	125	237		10,447
Gem						15	340		975	4						18	1,351
Gooding	275		12			1		84			0						372
Harney						10											10
Jerome	6		6		725	1		62			0						801
Lemhi											1						1
Lincoln	275		5												9		289
Malheur									1,065				20		10		1,095
Malheur										36							36
Minidoka	215		0					115									330
Minidoka			3														3
Owyhee								3					10		251		264
Payette	875			1,606				28	6,500								9,009
Power	3,133														90		3,223
Twin Falls	18		3					28	100	100	133				524		907
Union															450		450
Union & Baker															401		401
Wallowa															252		252
Washington	275																275
White Pine					1,070												1,070
Grand Total	5,558	1	51	2,918	3,295	60	880	543	18,846	284	279	3	40	125	3,457	18	36,358

What Does It Look Like?



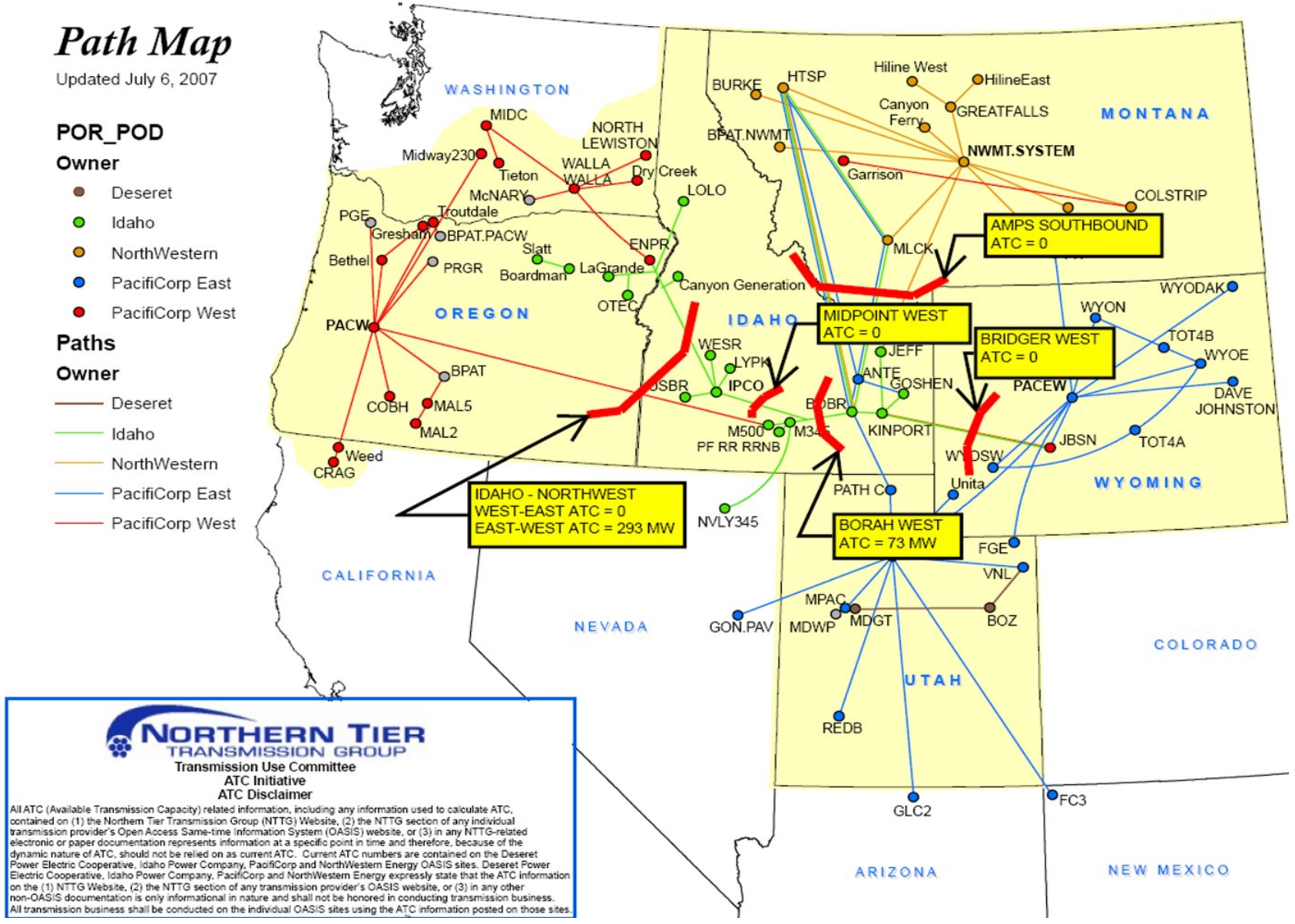
Typical Structure Types



Note: Heights may vary due to terrain and engineering constraints.
Other tower types may be used based on local circumstances.

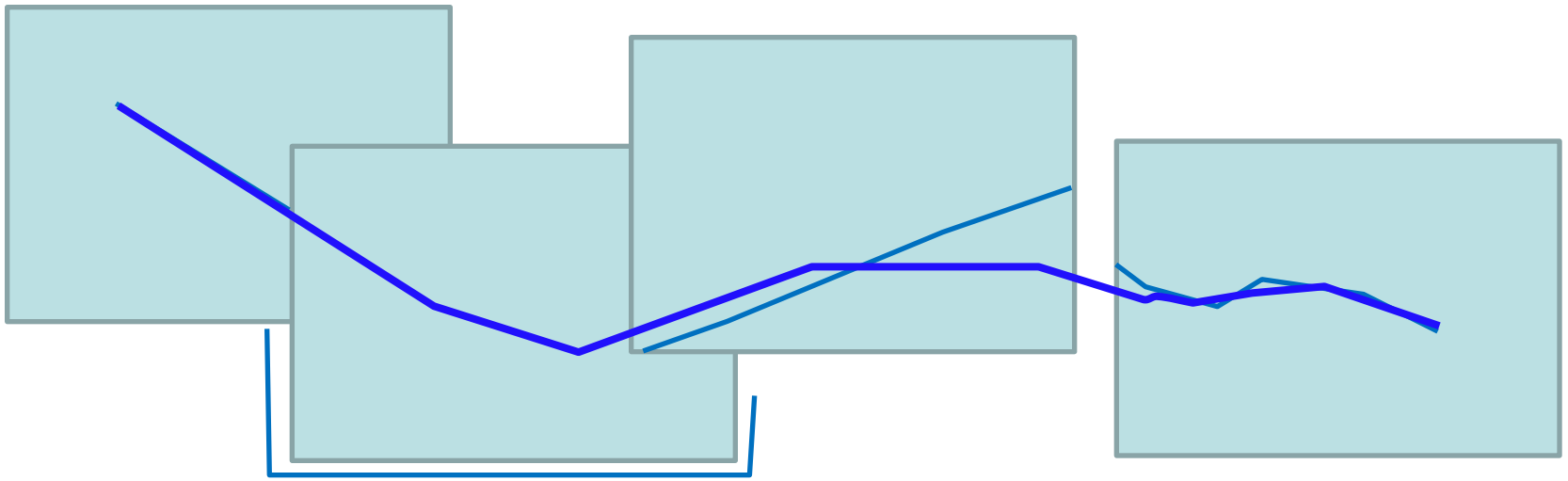
500 kV double circuit steel lattice tower

Transmission Constraints
- How Reliability Works

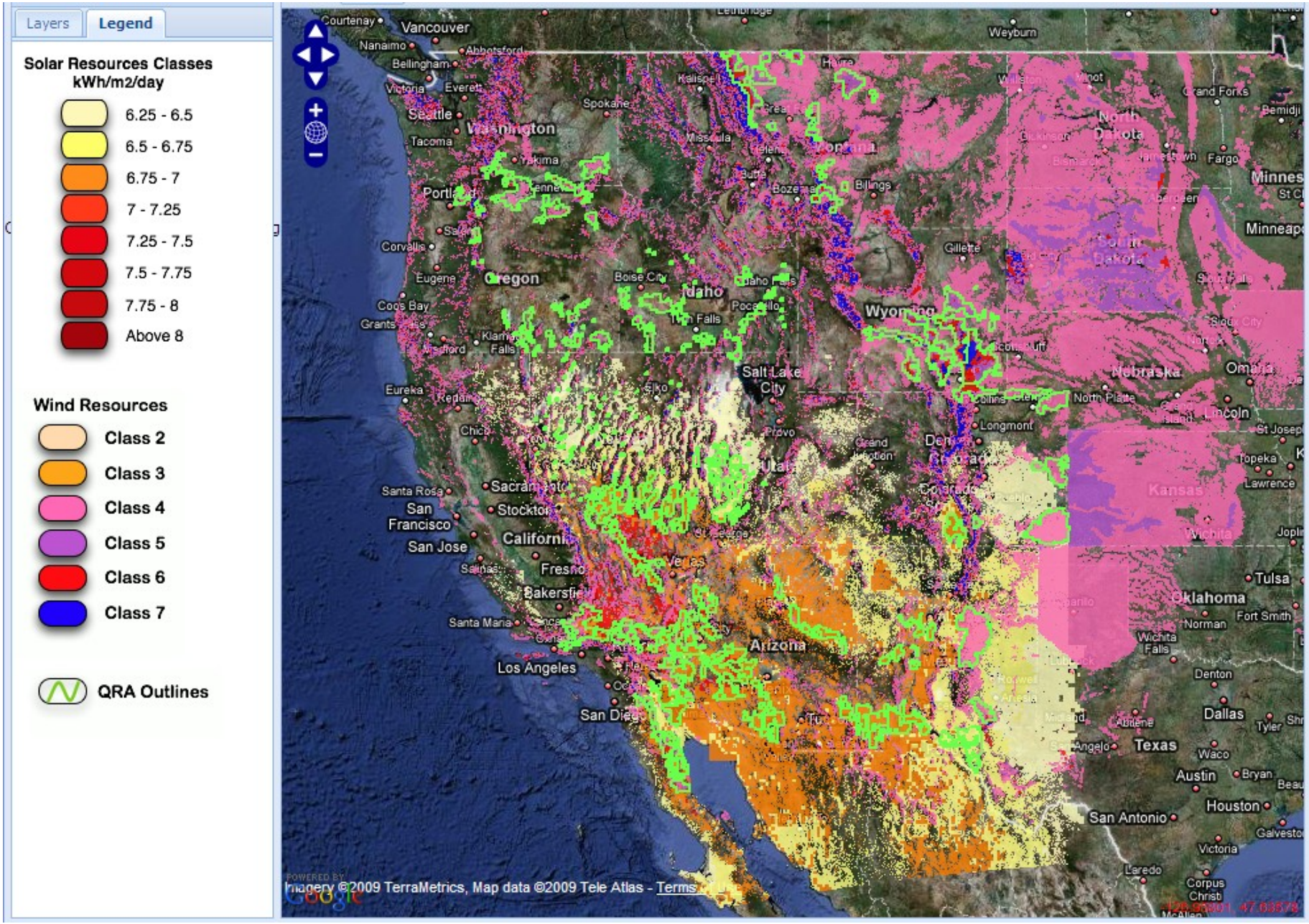


Linear Feature Permitting

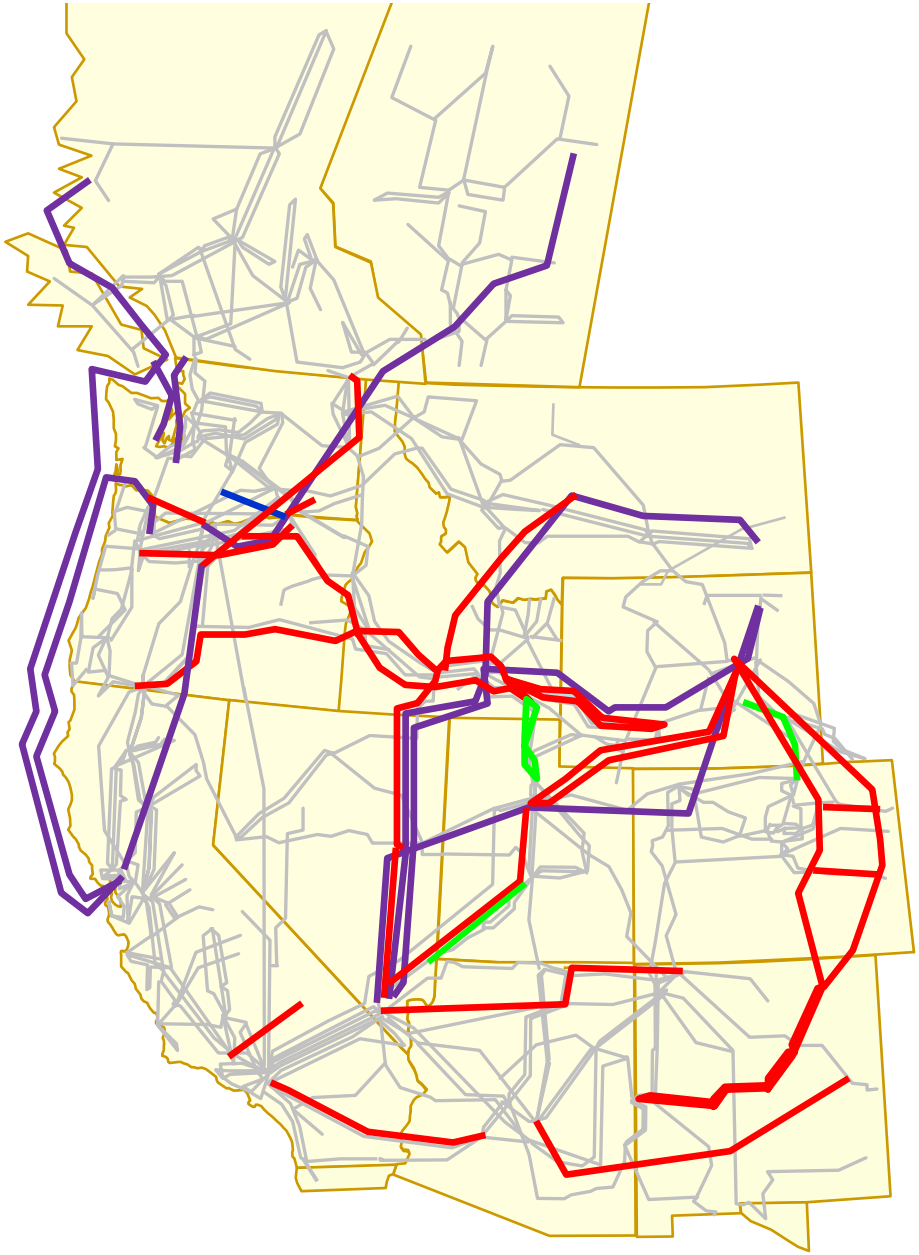
- Minimize impacts for total project, not only locally
- Things change during a project's life (if it takes too long)
- Public/Private lands issues – need alignments to match (WWC example)



Western Renewable Energy Zones



Western Transmission Grid



Proposed Transmission Projects
By Voltage Class

345 kV HVAC	
500 kV HVAC	
± 500 kV HVDC	

Renewable resource integration issues

- Capacity
- Operation and intermittency
- Cumulative impacts/connected actions

Public Process Experience

- Don’t show up with “the line” on the map – “hybrid” scoping:
  - Establish screening/alternative selection criteria
  - Mapping participation to develop acceptable alternatives
  - Promote “Proposed Action” + alternatives for detailed analysis
- Manage expectations and timelines
  - Project teams with project manager
  - NIMBY engagement, agree to accept process outcomes